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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,609	11/28/2003	Akira Nakajima	117894	8240
25944	7590	03/24/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			QUACH, TUAN N	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/722,609

Applicant(s)

NAKAJIMA, AKIRA

Examiner

Tuan Quach

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 2-7 and 9-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/28/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Claim 20 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on December 23, 2004.

Applicant's election with traverse of claims 1-19 in the reply filed on December 23, 2004 is acknowledged. The traversal is on the ground(s) that claim 20 does not claim a specific order and covers providing the operating elements over the chip prior to arranging on the circuit board. This is not found persuasive because of the following reasons. Initially, it cannot be seen how the claimed invention interpreted as such can be made as alleged; the circuit would not have been formed in that case when the operating elements are formed since in claim 20 lines 3-7, as the circuit board is required to be formed by arranging the two or more types of semiconductor chips of which the circuit board is at least a part. In any event, the product as claimed in claim 1 can also still be made by another and materially different process, e.g., wherein the operating elements are formed first on a temporary substrate, followed by forming the chips and the circuit board on the operating elements thereon.

The requirement is still deemed proper and is therefore made FINAL.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

For convenience in referencing the prior art, et al. are omitted.

Claims 1, 8, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichelberger.

Regarding claims 1 and 18, Eichelberger (6,159,767) teaches an electronic device or instrument comprising a circuit board at least part thereof comprised chips 102 including chips of at least two types and of different functions, (see e.g., column 8 last line, column 9 line 2), and dies 202, arranged as not to overlap and fixed to each other, e.g., via structures 104, plurality of operating elements 220 provided over the circuit board. See Fig. 6, column 8 line 62 to column 12 line 16. Claim 18 would be anticipated for the same reason above and in any application involving the invention delineated above and further unpatentable thereover as the preamble does not add any additional components or structures into the device in claim 1. Regarding claim 8, the provision of interconnecting layer between the circuit board and the operating elements is also shown for interconnection between the chips 102 and the operating elements 220 as in Fig. 6.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger taken with Burberry.

Eichelberger is applied above and does not recite the operating elements to include one of the light emitting layers each of which emits one of a plurality of colors.

Burberry (6,610,455) teaches the formation of different color producing light emitting layers to provide a full color display device. See the abstract, Figs. 2-3, column 6 lines 25-45, column 10 lines 19-27.

It would have been obvious to one skilled in the art in practicing the above invention to have employed the different light emitting layers in the operating elements since such is conventional and advantageous as suggested by Burberry wherein applications involving a full color display device can be obtained.

Claims 2-7, 9-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not appear to recite or suggest the necessary limitations to arrive at the invention delineated in these claims.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a). The formal requirement applies to the cancellation of claim 20 to be made in response to this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Shirashi (6,818,836), Shin (6,762,078), Wan (6,127,203), Shiraishi  
2003/0094685 are made of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Quach whose telephone number is (571) 272-1717. The examiner can normally be reached on M - F from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562.



**Tuan Quach**  
**Primary Examiner**